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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,594	03/01/2002	John D. Muzzy	S2005-1013	1163

7590 11/12/2003
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EXAMINER

ASINOVSKY, OLGA

ART UNIT PAPER NUMBER

1711

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,594

Applicant(s)

MUZZY, JOHN D.

Examiner

Olga Asinovsky

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-12 and 14-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12 and 14-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on October 15, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of the Patent Number 6,271,270 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The obviousness-type double patenting rejection of claims 1-29 over claims 1-11 of the Patent No. 6,271,270 is overcome in light of a proper Terminal Disclaimer.

The cancellation of claims 7 and 13 is noted.

The applicant amends claims 1-6 and 8-10 by deleting the term "pellet" in the preamble and inserting "A thermoplastic composite." Also, a thermoplastic composite is in the form of a shaped article.

And also, applicant amends independent claims 1 and 11 by including the definition of reinforcing fibers having a length of at least approximately 0.5 inches after combining recycled thermoplastic with said reinforcing fibers.

Support of the amendment can be found in the original specification at pages 5, lines 4-7, page 6, lines 10-15, page 9, lines 11-12, page 10, lines 22-23, page 24, lines 21-22 and page 27, lines 7-8.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 8-12 and 14-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fink U.S. Patent 5,578,357 in view of Sperk, Jr. et al U.S. Patent 5,258,445.

The issue of the present claims is a thermoplastic composite and a method of forming a thermoplastic composite comprising a recycled thermoplastic and reinforcing fiber such that said reinforcing fibers maintain the desired length of at least approximately 0.5 inch in the extrudate=after combining said recycled thermoplastic with said reinforcing fibers. A matrix of thermoplastic and said reinforcing fibers is forming a shaped article.

(The examiner presumes that a shaped article in the amendment claim 1 is a preformed extrudate which can be in the form of a roll, bar, rod or strips (supported at page 24, lines 14-15).)

The rejection is set forth at pages 3-5 of the office action mailed on 07/08/03 and is incorporated here by references.

4. Applicant's arguments filed on Oct 15, 2003 have been fully considered but they are not persuasive.

5. The applicant argues that Fink does not disclose all the elements of amended claims 1 and 11. The argument is that Fink does not disclose the reinforcing fibers having "a length of at least approximately 0.5 inches after combining said recycled thermoplastic with said reinforcing fibers."

Fink discloses a method of recycling a carpet. The recycled carpet comprises a recyclable isotactic polypropylene and the inert filler such as fiber glass that may be compounded with an isotactic polypropylene, column 9, line 27. Fink does not disclose a length of glass fibers, since any glass fiber can be used in Fink's invention. Fink only discloses the technique used to recycle a carpet composition including grinding the carpet down to basic fiber with a fiber length of less than $\frac{1}{4}$ inch and perhaps less than $\frac{1}{16}$ of an inch, column 16, lines 28-31. An extruded sheet is producing by using a recycled carpet.

In the amended claim 1, "a shaped article" is formed from a matrix of thermoplastic and reinforcing fibers. A term "shaped article" is broaden then pellets (in the original claims.) It is not clear how a produced shaped article would keep the predetermined length of fibers to 0.5 inch, since there is no definition of a said shaped article. There is no benefit to keep the specified length of fibers in a said shaped article.

Sperk, Jr. discloses a fiber-reinforced thermoplastic molding composition. The composition comprises immiscible thermoplastic polymer components and reinforced fibers. Glass fibers, either unsized or chopped in lengths of about one-eighth inch to two inches, and preferred into an average length of $\frac{1}{8}$ to $\frac{1}{5}$ inch fiber, column 17, lines 40-44. Sperk, Jr. also discloses that due to the shear mixing with the matrix

polymer the fibers are broken into shorter fibers, whereby said sheared fibers are typically reduced in size to about 0.2 to about 3 millimeters in length, column 17, lines 44-49. "Glass roving can also be utilized and subsequently chopped to a desired length", column 17, line 55. Also, Sperk, Jr. is concerning to maintain the desired physical properties of the molded end product. The fibers are generally added after a melt is developed in the apparatus, as toward the end of the compounding process, column 18, lines 30-40. The over-mixing is avoided because it tends to reduce the fibers to an undesirable short length, column 18, lines 41-43. In light of the disclosure in Sperk, Jr. and the technique to avoid reducing the fibers length, an average length of 0.5 inch fibers can be obtained after mixing the fibers with thermoplastic polymer. The fiber-reinforced thermoplastic molding composition blend can be formed into a suitable form or shape for storage, column 18, lines 18-21. Although Sperk does not disclose thermoplastic composites having reinforcing fibers of at least 0.5 inches, Sperk is teaching a benefit of using a long length of fibers. Sperk is teaching that "undue breakage of fibers reduces the physical properties of the molded end product", column 18, lines 36-38.

It would have been obvious to one of ordinary skill in the art to consider that reinforced filler=fiber glass in Fink's invention can be utilized having the length of one-half inch fiber in light of the teaching by Sperk, Jr. since any fiber can be used in Fink's invention and there is no chemical reaction between the glass fiber and thermoplastic material. Because Sperk, Jr. discloses the benefit of using glass fibers having the

desired length and to avoid undesirable short length, since the short length fibers reduce the physical properties of the molded product, column 18, lines 35-43.

There is no PTO Form 1449 in the present case 10/087,594. The applicant's references from the parent case 09/272, 801 are cited on the Form 892 for the present case 10/087,594.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 703-308-0041. The examiner can normally be reached on 9:00 to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Olga Asinovsky
Examiner
Art Unit 1711

O.A.

O.A.
October 23, 2003
October 31, 2003
November 04, 2003


RABON SERGENT
PRIMARY EXAMINER